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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
MENON, KRISHNAN S	

ART UNIT	PAPER NUMBER
1723	

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/734,050	GORDON, ANDREW W.	
	Examiner	Art Unit	
	Krishnan S. Menon	1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 June 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *15-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *15-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 15-36 are pending as amended 6/12/06.

Terminal Disclaimer

The terminal disclaimer filed on 6/12/06 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of any patent granted on application number 10/630,351 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

A. Claims 15-26 and 28-35 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The negative limitation, "not at the first depth" does not seem to have support in the original disclosure. See MPEP 2173.05(i) about negative limitations.

B. Claims 24 and 25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claims recite instrumentation and sensors for detecting depth of thermocline and plankton in the ocean. However the specification as originally filed does not provide any details of the instruments and sensors for one of ordinary skill in the art to determine the depth of thermocline and plankton under the sea.

Claim Rejections - 35 USC § 102

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 28, 29, 31, 32, are rejected under 35 U.S.C. 102(a/e) as being anticipated by, or in the alternative, under 35 USC 103(a) as being obvious over, Bosley (US 6348148).

Bosley teaches a continuous process for making desalinated water by reverse osmosis (abstract, figures) from seawater. The system is offshore, on board a ship (column 4 line 65 teaches the system suspended from a ship, which would be 'on-board'. During examination, the claims must be interpreted as broadly as their

terms reasonably allow. > In re American Academy of Science Tech Center, ___ F.3d ___, 2004 WL 1067528 (Fed. Cir. May 13, 2004)(The USPTO uses a different standard for construing claims than that used by district courts; during examination the USPTO must give claims their broadest reasonable interpretation.)), comprises a vessel (50) for producing a permeate (column 5 lines 4-67), concentrate discharge below the thermocline (lines 35 and 58), intake (column 5 lines 25-33), the intake of sea water and the discharge of concentrate at different levels, permeate delivery means comprises pipeline, transfer pumps, second vessel, etc: see column 5 lines 36-48.

Depth of intake to avoid planktons: Bosley has the system operating at a depth, not at the surface, which would inherently avoid planktons.

Concentrate is mixed with seawater at discharge for dilution – column 4 lines 1-20.

2. Claims 15 and 28-30 are rejected under 35 U.S.C. 102(e) as being anticipated by, or under 35 USC 103(a) as being obvious over, Krylov (US 6,658,889).

Krylov teaches a system and a process of desalinating seawater aboard a ship by reverse osmosis having a water intake (7) positioned in the body of the seawater, a mixing space (2) for mixing seawater with RO concentrate (makes ice slush with sea water and concentrate mixture), and a discharge of the mixture (inherently, the ice slush would be discharged at some point), which is inherently not at the first depth, but at a different point. The express, implicit, and inherent disclosures of a prior art reference may be relied upon in the rejection of claims under 35 U.S.C. 102 or 103. "The inherent teaching of a prior art reference, a question of fact, arises both in the context of

anticipation and obviousness." In re Napier, 55 F.3d 610, 613, 34 USPQ2d 1782, 1784 (Fed. Cir. 1995) (affirmed a 35 U.S.C. 103 rejection based in part on inherent disclosure in one of the references). See also In re Grasselli, 713 F.2d 731, 739, 218 USPQ 769, 775 (Fed. Cir. 1983).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 15-23 and 28-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lampe, et al, "PCS-Preussag Conversion Systems", Elsevier, 1997, in view of Bosley'148.

Lampe teaches a system and a process of desalination using reverse osmosis as claimed, wherein the system is installed on board a ship. However, Lampe does not teach the specifics of water intake and concentrate discharge. Bosley teaches a process of desalination and system either suspended from a ship or moored to the sea floor, including water intake, concentrate discharge and the requirement of mixing seawater with the concentrate properly at discharge to avoid pollution of the environment of discharge as discussed in paragraph 1 above. It would be obvious to one of ordinary skill in the art at the time of invention to use the teaching of Bosley in the teaching of Lampe for the proper operation of the system as taught by Bosley.

Some of the instant claims differ from the teaching of Lampe in view of Bosley in the recitation of the location of the water intake and concentrate discharge, the intake at below the thermocline region and discharge above, the concentrate discharge having a plurality of ports, and a mixing space aboard the ship. Bosley teaches in column 4 lines 1-20 that the discharge of the concentrate should be safe to the environment, and teaches discharging the concentrate where mixing of the seawater with ocean current would be very efficient. Bosley also teaches discharge of concentrate at a distance form the intake – see 38 and 40, figure 4, discharge at 14, figure 3, and figure 6 which has a different intake and discharge. These teaching would be equivalent to the applicant's claimed mixing, discharge of the concentrate water using multiple ports or at a distance from the intake. An express suggestion to substitute one equivalent component or process for another is not necessary to render such substitution obvious. In re Fout, 675 F.2d 297, 213 USPQ 532 (CCPA 1982).

Regarding the limitation of the sea going vessel having a draught of 10 meters – this pertains only to the size of the ship, which is not patentable. In Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

Regarding "sea chest": this is only a water compartment in the ship's hull, which is inherently present in all ships, such as the ballast tank.

4. Claims 26, 27 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lampe in view of Bosley'148 as applied to claims 15-23 and 28-35 above and further in view of Husick (US 5,830,366).

Instant claims differ from the teaching of Lampe and Bosley in the aspirator for mixing sea water with discharging concentrate. Husick teaches an aspirator or a jet pump for mixing waste water with water to discharge waste from a water marine water filtration system. It would be obvious to one of ordinary skill in the art at the time of invention to use the teaching of Husick in the teaching of Lampe in view of Bosley to discharge the waste of the RO system (concentrate and other wastes) continuously by a jet pump (aspirator) as taught by Husick (See column 2 lines 43-57).

Response to Arguments

Applicant's arguments filed 6/12/06 have been fully considered but they are not persuasive.

Most of the arguments are moot because of the new grounds for rejection of the new claims. Regarding the Bosley reference, Bosley does teach the system aboard a ship as shown in the rejection, and ships have hulls. Bosley teaches discharging the concentrate in a region of the ocean where there is ocean currents to dilute the concentrate and to prevent any environmental impact. Bosley recognizes the problem

with the release of RO concentrate, and the need to discharge concentrate at a point far away from the feed intake. Applicant's claims only recite structure and steps of discharging the RO concentrate which are obvious equivalents of what Bosley teaches.

Argument about the Husick reference is not commensurate in scope with the rejection because the Husick reference is not used for any teaching of the reverse osmosis system, but only for the use of aspirator for discharging waste. With respect to the argument that Husick is not properly combinable with Bosley to get to the limitation of the claims, the motivation to combine need not be the same as that of the applicant; and the combination does not have to be a bodily incorporation, but what one of ordinary skill in the art could glean from the teaching of the references.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S. Menon whose telephone number is 571-272-1143. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Krishnan S Menon 6/15/06
Examiner
Art Unit 1723